

# **Final Report**

**Project No. 446AH00143**

**Grant No. G008005184**

**CFDA No. 13.446A**

**A HOME-BASED MEDIA APPROACH FOR DEVELOPING  
CRITICAL SKILLS IN YOUNG VISUALLY IMPAIRED CHILDREN**

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**U.S. DEPARTMENT OF EDUCATION**

**Office of Special Education Programs  
Media Services and Captioned Films Program**

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### A Home-Based Media Approach for Developing Critical Skills in Young Visually Impaired Children

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U.S. DEPARTMENT OF EDUCATION

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## Abstract

The impact of blindness on an infant's development is documented and substantial. Numerous research studies have indicated the importance of teaching parents of blind and visually impaired children early stimulation techniques and strategies for coping with their child and their feelings. Virtually all studies confirm that the lack of stimulation to sensory systems is damaging to those systems. Failure to provide a stimulating early environment leads not only to a continuation of the developmental lag, but to actual atrophy of sensory abilities and to eventual developmental regression. Increasingly, infants with visual handicaps also have additional problems. When working with infants who have impairments in addition to blindness, early intervention becomes increasingly critical.

The Home-Based Media Approach for Developing Critical Skills in Young Visually Impaired Children project involved the development of materials for parents and teachers working with visually impaired children at the birth-24 month developmental level. The focus of the Home-Based Media materials is to assist parents and teachers in preventing and remediating developmental lags associated with visual impairment and concomitant conditions. The project has three major components: tangible, electronic child-use items; a slide-cassette program; and a guidebook for parents and teachers. All three components were specifically and carefully developed to reflect the critical skill needs of the young visually impaired child.

Each project component was developed and evaluated with the assistance of over 200 consumers and was modified and reevaluated until it demonstrated student, parent, and teacher effectiveness. Significant parental involvement was incorporated into the project beginning with the materials needs assessment/identification phase through field evaluation. The slide-cassette program and the guidebook were evaluated in rural and urban environments and included Black, Spanish speaking, and Native American infants and their families. All three project components will be disseminated nationally by the American Printing House for the Blind.



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## Introduction

### Background and Related Research

The importance and value of early intervention programming for young handicapped infants and children is hardly a new concept. Skeels's 1939 study (Kirk, 1968), which demonstrated the positive results of early intervention with a sample of institutionalized preschool children, eventually led to a follow-up study in 1966. The results of Skeels's longitudinal study showed that all of the experimental children who received early intervention were self-supporting 21 years later; by contrast, the control group had only 50% self-supporting members, five of whom were institutionalized. Between these studies, Kirk conducted a landmark experiment involving the preschool education of mentally retarded children. Kirk's study (1958) also demonstrated significant gains for the experimental group children exposed to intensive preschool education training. These studies helped to convince Congress, many years later, to pass a bill allocating monies for preschool education of handicapped children (Kirk, 1968). Thus by the 1970's, early childhood education for handicapped children had a strong conclusive research base to support the common sense rationale held for years by practitioners (Reynolds and Birch, 1977). Also during the 1970's and early 1980's, a great deal was learned about the competencies of infants, as stated in Garwood (1983):

Because of advances in research methodology, instrumentation, and theory, behavioral scientists have come to view even very young infants as relatively competent organisms capable of participating in complex interactions with their world.  
(p. 17)

The rationale for beginning intervention early, preferably simultaneous to diagnosis in infancy, is convincing. Several reasons follow:

1. The first years of a child's life set the pace for and influence all subsequent development. Early learning and development have paramount influence on the child's later life (Peterson, 1982).
2. Handicapping conditions, left unheeded, frequently interplay and lead to additional developmental deficits.



3. Parents benefit from the support and learn constructive parenting patterns and educational methods through early intervention programs.
4. The longer a developmental delay or handicapping condition persists without intervention, the more time consuming to correct (Reynolds and Birch, 1977).
5. Early intervention is cost effective for taxpayers (Swan, 1981).

Children with severe visual impairments are frequently diagnosed at birth or in early infancy, making early intervention programs for this population both practical and critical. Lehr (1982), discussing early training for infant severely/profoundly handicapped children, maintains that the intensive care nursery should be the first classroom. The concept of training parents in the home to work with their infant is gaining widespread implementation and approval. Bronfenbrenner (1975) states:

The family seems to be the most effective and economical system for fostering and sustaining the child's development. Without family involvement, intervention is likely to be unsuccessful and what few effects are achieved are likely to disappear once the intervention is discontinued. (p. 470)

The impact of blindness on an infant's development is documented and substantial. Numerous research studies have indicated the importance of teaching parents of blind and visually impaired children early stimulation techniques and strategies for coping with their child and their feelings. If these services are not provided at the crucial early stages, we will likely see manifestations of isolation and serious maladjustment in many blind children and adults (O'Brien, 1976). Fraiberg (1971) stressed the critical importance of providing direct and continued support to the mother of a blind baby from the time of diagnosis. DuBose (1979) has researched the effects of visual impairment and blindness on one aspect of development, the sensorimotor period. The following chart summarizes sensorimotor developmental problems within the birth-24 month period (DuBose, 1979):

<u>Period</u>	<u>Expectations</u>	<u>Effects of Blindness</u>
I. Reflexes (0-1 month)	The infant's behavior is characterized primarily by reflexive responses to his own body and to some aspects of the external world. Some refinement of reflexive behavior occurs as the infant discovers, for example, that some objects are "suckable" and some are not.	1. no pupillary
II. Primary Circular Reactions (1-4 months)	The infant begins to repeat selectively those actions that produce effects that are interesting or satisfying to him. These actions are primarily directed to his own body rather than to external objects.	1. no visual tracking 2. no examination of feet & hands 3. no intentional grasping of objects
III. Secondary Circular Reactions (4-9 months)	The infant reproduces behaviors that produce effects in the external world that are satisfying or interesting to him. This stage marks the beginning of the infant's effective orientation to the external world.	1. continues bodily centered sensations 2. fails to follow rapid movements of persons and objects 3. fails to understand the cause or source of object activation 4. no search for lost objects
IV. Coordination of Secondary Circular Reactions	The beginnings of intentionality are seen in fourth stage, in that the infant begins to coordinate his behavior	1. fails to visually attend to objects or persons or imitate movements

<u>Period</u>	<u>Expectations</u>	<u>Effects of Blindness</u>
	with respect to the external world in more complex ways. His use of specific ends demonstrates his increasing organization of the world. He begins to anticipate the effects of his own actions and those of other people.	<ol style="list-style-type: none"> <li>2. fails to realize similarity in objects, thus does not generalize old schema to new objects</li> <li>3. cannot see a distant goal to attain it.</li> </ol>
V. Tertiary Circular Reactions  (12-18 months)	In this stage, the infant's behavior clearly involves active trial and error experimentation on the world. His behavior becomes more flexible in that he can systematically vary his actions to obtain a specific goal. He seems to seek novelty for the sake of learning more about the world.	<ol style="list-style-type: none"> <li>1. fails to see relationships between action and solution that can be accomplished to produce activity</li> <li>2. less problem solving in environment</li> <li>3. fails to attack barriers to secure toys</li> <li>4. fails to see the usefulness of tools to assist in securing goals</li> </ol>
VI. Invention of New Means through Mental Combination  (18-24 months)	This stage marks the beginning of internalized thought. The child need no longer engage in overt trial-and-error behavior, but rather can think about possible behaviors and the effects that they would have. According to Piaget, this stage is a	<ol style="list-style-type: none"> <li>1. delayed in internalization of action</li> <li>2. cannot categorize objects by salient dimension</li> <li>3. does not pretend by imitating</li> </ol>

<u>Period</u>	<u>Expectations</u>	<u>Effects of Blindness</u>
	landmark in that it frees the child from his own perceptions and behaviors. He begins to imagine behaviors and their consequences.	adult behavior previously observed

Increasingly, infants with visual handicaps also have additional problems. When working with infants who have impairments in addition to blindness, early intervention becomes increasingly critical. Various specialists, often including occupational therapists and physical therapists, are needed to adequately serve the visually impaired child with multiple problems. Additional handicapping conditions are often interactive, presenting a unique challenge to professionals. The sum of two handicapping conditions is often greater than merely adding the two together, forming a synergistic relationship (Lehr, 1982). Meirer (1975) suggests that the earlier potential or existing disabling conditions are detected, the less likely they are to become severe. Both Kaines (1973) and Hering (1976) offer evidence that programs which provide early stimulation, and which meet the educational needs of young children, can reduce the number who will need long-term special services. Unless appropriate stimulation and support to the child and his family occurs at certain critical periods in a child's development, it is likely that irreversible consequences for adulthood will result (Erickson, 1963; Rapaport, 1960). Virtually all studies confirm that the lack of stimulation to sensory systems is damaging to those systems. Failure to provide a stimulating early environment leads not only to a continuation of the developmental lag, but to actual atrophy of sensory abilities and to eventual developmental regression. Studies done by Fantz (1973) conclude that deprivation of early visual experience (at least in animals) has resulted in atrophy of the physical structures of vision and, therefore, permanent blindness. Stimulating visual experiences are essential to keep the physical visual structure functional. Furthermore, Haring (1976) states:

All systems of an organism are interrelated in a dynamic way; failure to remediate a handicap may multiply its effects in other developmental areas, and may produce other handicaps, particularly social and emotional ones, that are secondary to the initial insult. (p. 58)

It is sobering to realize that the effects of a handicapped condition in one sensory system such as vision, may produce handicaps in another system.

### Project Scope

The Home-Based Media Approach for Developing Critical Skills in Young Visually Impaired Children project involved the development of materials for parents and teachers working with visually impaired children at the birth-24 month developmental level. The focus of the Home-Based Media materials is to assist parents and teachers in preventing and remediating developmental lags associated with visual impairment and concomitant conditions. The project has three major components: tangible, child-use items; a slide-cassette program; and a guidebook for parents and teachers. All three components were specifically and carefully developed to reflect the critical skill needs of the young visually impaired child. The purpose of this report is to reflect and summarize the various activities of project staff in developing, designing, and evaluating the three program components of the Home-Based Media project. Project activities are reported sequentially as they occurred in the developmental process. As would be expected, project components did not always develop simultaneously but did progress cohesively.

### Developmental Process

In April 1979, an educational materials needs assessment meeting was conducted by American Printing House for the Blind researchers in conjunction with the Fifth International Seminar on Blind Preschool Children. There was a unique consensus among the 35 seminar participants that materials were particularly needed to assist visually impaired children functioning from birth to 24 months through critical developmental stages. To meet these needs, the research staff conceptualized a package of tangible, written, and recorded materials for use in stimulating such developmental "milestones" as reaching, grasping, bringing hands to the midline, sitting, object permanence, and walking. The audio portion of the package was designed to illustrate appropriate parent/child interactions. A guidebook would contain activities, objectives, and guidelines in assisting the development of the young visually impaired child. A tangible child-use material(s) would aid the birth-24 month level child in developing identified critical skills.

A proposal requesting federal grant monies to develop the proposed package of materials was submitted to the Bureau of Education for the Handicapped under the Handicapped Media Services and Captioned Films Program. In September, 1980, APH was notified that the grant proposal, "A Home-Based Media Approach for Developing Critical Skills in Young Visually Impaired Children," was funded for a 2-year period. Project staff began work on the new project in late 1980 via an extensive literature review, resulting in examination of more than 100 journal articles, books, and other publications. The literature review included four major areas: information on normal development of children birth to 2 years; critical areas of skill development in the visually impaired child from birth to 2 years; available information, guidelines, and resources for parents; and materials for teachers in designing and implementing home-based educational programs. Simultaneously, a commercial materials search was conducted to determine existing materials for parents and teachers useful in home-based programming for visually impaired infants. A computerized search on available materials was conducted by LINC Resources in Columbus, Ohio. Printing House project staff also conducted a manual search for related materials in commercial catalogs and directories. Both the LINC and the Printing House search demonstrated a dearth of applicable materials in the area of home-based media or materials for parents, teachers, and the young visually impaired child.

Project staff wanted to benefit from and integrate the knowledge and experience of teachers of young visually impaired children. Thus, a questionnaire was developed and circulated to 150 teachers of preacademic level visually impaired children. The questionnaire, specifically designed to address project needs and goals, included the following questions:

1. List five critical stages or skills you consider most difficult for a blind child to master between birth and 2 years.
2. List five critical stages or skills you consider most difficult for a visually impaired child with residual vision to master between birth and 2 years.
3. What commercial materials have you used successfully for vision stimulation/training in preacademic children? List each item, and then briefly describe how it was used and visual skills that were developed.

4. List any handmade/teacher-made materials that you have used successfully for vision stimulation/training in preacademic children. Briefly describe how the item was used and visual skills that could be developed.
5. Sketch any items that do not currently exist (or items which exist but need major modification) that you would like to see developed for vision stimulation.
6. List the toys or educational materials which the visually impaired children you have worked with enjoy the most. Indicate if the items appeal particularly to children with or without residual vision.

An excellent response rate of 89% was obtained for the questionnaire. All responses were recorded, tabulated, and analyzed. The collective data were studied carefully to identify skill areas where visually impaired children begin to break down in their development as compared with their sighted peers, and the kinds of materials needed for remediation.

A consulting committee for the project, including both parents and professionals, was formulated. Project staff contacted prospective committee members, made preparations and arrangements, and conducted the meeting. A listing of project consultants can be found in Appendix A of this report. The purpose of the consultant group meeting was to assist Printing House project staff in determining the most needed materials and thus, those prioritized for development within the Home-Based Media project. The committee utilized the information generated through the literature search, commercial materials search, the questionnaire completed by teachers of young visually impaired children, and their collective experience and expertise. Ultimately, the consultants determined that the single most important factor in successful skill development in visually impaired children is a mutually satisfying parent-child relationship, with parents giving plenty of encouragement and extra help to their visually handicapped child. Program materials should thus be developed with this basic tenet in mind.

Committee members further discussed the lack of materials for developing early physical and motor skills. Research studies in the literature support the experience of practitioners (consulting committee) in identifying gross motor skills as an early deficient critical skill area in blind and visually impaired infants. The following chart, abstracted from Fraiberg (1977), demonstrates the need for materials to assist the young blind and visually impaired child in acquiring basic gross motor skills.

<u>TASK</u>	<u>Age in months</u>	
	<u>(BLIND)</u>	<u>SIGHTED</u>
Sits alone momentarily	6.75	5.3
Rolls from back to stomach	7.25	6.4
Sits alone steadily	8.00	6.6
Prone, elevates self by arms	8.75	2.1
Stepping movements (walks hands held)	10.75	8.8
Raises self to sitting position	11.00	8.3
Pulls up to stand using furniture	13.00	8.6
Stands alone	13.00	11.0
Walks alone, 3 steps	15.25	11.7
Walks alone across room	19.25	12.1

The consultants worked in small groups to further formulate media and materials to address deficient gross motor skills and the early development of a positive and helping parent-child relationship. Following much discussion, the consultants agreed that the Home-Based project should have three major and distinctive, although related, components. One component would be an electronic mat which, when a child placed upon it makes appropriate movements, would reward him with various sensory experiences, such as vibration, warmth, and sounds. Two additional electronic materials were proposed as options, should the electronic mat not be feasible. A second tangible item was an electronically activated headband and sensor, which plays a musical tune when the head is righted. Another major component would be a slide-tape program, aimed at parents, for professionals and nonprofessionals in the field to use in home-based programs. The information in this presentation would be related to, and reinforce, that in the third major component, a parent guide that would provide answers to the many questions parents have about effectively raising a young visually impaired child.

Following the initial committee meeting, specifications were formulated and drawings were made for the electronic mat, with the assistance of a toy designer and an electronic technician. Specifications were subsequently developed for the slide-cassette program and the parent resource guide. Project staff proceeded with sourcing parts for the electronic mat and identifying media development experts for the slide-cassette. Project staff began an outline of the parent guide, utilizing the literature search, commercial materials search information, the teacher questionnaire results, and the consultants recommendations. As development of prototypes continued for each of the three project components, staff consulted with a variety of experts including an industrial toy

designer, electronic specialists, audio-visual technicians, as well as teachers, parents, and committee members. Ultimately, a prototype of the electronic mat was prepared for field trial, a detailed outline of the guidebook was written, and a storyboard used in filming was developed for the slide-cassette presentation.

In the development of two of the three component prototypes, there were a variety of problems to be solved. Initially, there was difficulty getting timely delivery of the electronic mat drawings from the industrial toy designer. When the drawings arrived several weeks late, they were found to be incomplete. The designer was to provide a list of all necessary materials and their industrial sources for each tangible item to be developed. His failure to do so caused additional delay. The drawings and specs were sent out for bids. All bids far exceeded budgeted monies for each item, so an internal solution was sought. Since the grant was written, the Research Department has added a Design and Development Section with design, pattern, and model-making capabilities. This Section, along with the Printing House's Electronics Department, agreed to develop initial prototypes within the budgeted monies.

Several minor problems also occurred with the slide-cassette audio-visual component. Filming of the mother and child proved time-consuming and fatiguing to the baby. Consequently more time was needed for filming than originally planned. In addition, there was an unanticipated family move and several illnesses that delayed filming. Scenes filmed include: riding in a car, doing the laundry, mealtime, grocery shopping, bathtime, playing, and bedtime. Each segment demonstrates how parents can teach their young visually impaired child through these everyday experiences. These delays with the tangible prototypes and audio-visual component prototype necessitated a modification of the projected time line. Meanwhile, arrangements were made with teachers and parents to evaluate each of the three components: the electronic mat, slide-cassette program storyboard, and the guidebook detailed outline.

Data were collected from 25 field evaluators who assessed the value of each of the three components. Each of the three components was critiqued in the areas of quality, usefulness, durability, safety, content, organization, and age appropriateness. Each evaluation was recorded and the data were subsequently analyzed to determine revisions for each component. At this juncture, a second meeting of the consultant group was held to determine needed revisions and modifications to project components. A list of participating consultants can be found in Appendix A section. Again, parents as well as professionals from a variety of disciplines

were represented in the consultant group. Interfacing the formative evaluation data with the recommendations of the consultants groups resulted in the following decisions for revisions and modifications:

1. Tangible child use materials--Include a timed circuit breaker with the electronic mat. Consider changing the mat power source to battery operated. Add a textured cloth overlay. Develop a second electronic headband device for the purpose of giving musical reinforcement to a child whose head is held in an upright position. (The headband was suggested as an optional item by the first consulting committee meeting.)
2. Slide-cassette program--Replace the narrator used in the prototype presentation. Add a musical background for interest and emphasis. Include more slides of sibling and father interaction; include an infant and a minority child. Develop a version of the slide-cassette program in Spanish.
3. Guidebook--Numerous suggestions were made for expanding the content areas included in the guide. Recommendations included incorporating a glossary of vision terminology, a section on medical visits, a listing of toys and household materials useful in teaching various skills, safety considerations, community resources, and so on.

Project staff proceeded with implementing the revisions proposed by the consultants as well as incorporating additional recommendations made by field evaluators. While implementing revisions and modifications, project staff continued to work with a variety of technical resource persons. Arrangements were made for a second field evaluation with numerous teachers and parents. The second field trial of revised materials was lengthened to allow for more indepth and longitudinal evaluation. The electronic mat and the electronic headgear reinforcer were evaluated by both long term (3-6 months) and short term (1-3 months) methods. Both electronic items were field tested with 12 programs involving some 80 visually impaired children functioning between a birth-24 month level. The slide-cassette program was evaluated by 46 programs serving young visually impaired children. This evaluation process yielded completed evaluations from 68 professionals and 91 parents. The guidebook, greatly expanded from the original detailed outline, was reviewed by a total of 103 parents and professionals. Each field evaluator completed an evaluation form specifically designed for each of the

three project components. Additional information concerning areas of evaluation can be found in the Results section of this document.

All three components of the project were substantially revised and expanded prior to the second, and more inclusive, field evaluation. Drawings of the modified electronic child-use materials (mat and headband) can be found in Appendix B. An expanded outline, used in formulating the 87 page guidebook used for field evaluation, is contained in Appendix C. A script reflecting the slides and narrative in the revised slide-cassette program, is Appendix D.

Each of the three components was field evaluated by both professionals and parents. All components were also subjected to internal Printing House review as well as consulting committee review by mail. Generally, evaluation forms requested a critique in areas such as content, organization, technical quality, usefulness, durability, safety, and age appropriateness. As completed evaluation forms were received, each response was posted and checked by project staff. Considering the large number of field evaluators and the necessity of manual recording, this was a time consuming aspect of the field testing procedure. For each of the three components and for each evaluation response, the data were recorded, tabulated, and subsequently analyzed for groupings of modification recommendations. The data for all three components indicated the need for relatively minor revisions.

Revisions were determined by project staff solely on the basis of field evaluation data. General modifications and revisions to each of the three components follows:

1. Tangible child use materials--Make mat more pressure sensitive for the very young infant. Devise a method by which more than one pad can be used at the same time to accomodate chronologically older children who are developmentally between the birth-24 month level. Interface the mat with other devices, such as a vibrator, hair dryer, etc. Eliminate the electronic headgear musical feedback mechanism, because a continuous playing device can not be located.
2. Slide-cassette program--Include at least one slide of the following: a Native American child, child with a pet, parent and child involved in visual stimulation/development activity, and child shown on stomach over a bolster to demonstrate a means for developing trunk and neck control.

3. Guidebook--Include a brief developmental chart or overview, summarizing normal child development between birth-24 months. Incorporate additional pictures and line drawings within the text. Suggest that parents keep a medical log. Expand discussion of specific considerations for a single parent. Augment the information on vision stimulation and early visual development. Consider a spiral binding.

All of the above modifications were made to program materials, along with numerous others. When revisions had been completed to each component, all materials were again placed in the field for limited final evaluation to ensure that all modifications were accurate and appropriate. A final expert review was also conducted. Following these final evaluations, each of the three components was readied for submission to the Printing House Research and Development Committee. This group, composed of Printing House consumers and ex-officio trustees, enthusiastically approved all three components of the Home-Based Media materials for production. Project staff have since been working closely with Printing House production personnel to ensure a smooth transition from the research and development to production phase. Staff have also been involved in developing specifications, sourcing components, and final editing. The Printing House will submit the first production set of the Home-Based Media materials to the U.S. Testing Laboratories in Hoboken, New Jersey for product safety analysis.

In summary, the following time line shows the entire project developmental process. A broken line indicates the end of U.S. Department of Education financial support and the beginning of Printing House project support.

<u>TIME SEQUENCE</u>	<u>TASK</u>
November 1980-January 1981	Literature review
November 1980-January 1981	Commercial materials search (computerized and manual)
January 1981	Design of teacher questionnaire (regarding critical needs of young visually impaired children)

<u>TIME SEQUENCE</u>	<u>TASK</u>
February-March 1981	Dissemination of questionnaire
February-March 1981	Tabulation and analyzation of questionnaire data
February-March 1981	Identification of consulting committee
March 1981	Arrangements for consulting committee meeting
March 1981	Conduct consulting committee meeting
April 1981	Tabulation of consulting committee recommendations
April-May 1981	Identification of 3 major components
May 1981	Development of specifications for each of 3 components
June 1981	Identification of parents, teachers, and children for formative evaluation
June 1981	Make arrangements and determine procedures for field evaluation
June 1981	Translate slide-cassette program into Spanish
June-July 1981	Develop evaluation systems for teacher, parent, and child data

<u>TIME SEQUENCE</u>	<u>TASK</u>
August-December 1981	Conduct formative evaluation for each of three components
January-February 1982	Tabulation and analyzation of formative teacher, parent, and child data from each of three components
March-April 1982	Arrangements for second consulting committee meeting
May 1982	Conduct consulting committee meeting
June-July 1982	Tabulation of consulting committee recommendations with formative evaluation data
July-September 1982	Develop and initiate revisions of each of three components
<hr/>	
October-December 1982	Produce all revised components in quantity for field evaluation
November-December 1982	Identification of teachers, parents, and children for final evaluation
December 1982	Make arrangements and determine procedures for final field evaluation
December 1982	Develop evaluation systems for teacher, parent and child data

<u>TIME SEQUENCE</u>	<u>TASK</u>
January-April 1983	Conduct first field evaluation for each of three components
May-June 1983	Tabulation and analyzation of teacher, parent, and child data from final field evaluation
June-July 1983	Determine and initiate revisions for each of three components
August-September 1983	Conduct limited field trial to determine validity of final revisions
September-October 1983	Conduct final expert review
October 1983	Conduct final internal review
October 1983	Prepare materials for production approval
November 1983-January 1984	Develop production specifications and draft drawings for three components
February-May 1984	Prepare final report
June-July 1984	Submit materials for safety review and analysis by U.S. Testing Company

## Procedures and Results

Evaluative data for all three project components were obtained primarily through the process of professionals and parents using the materials for a designated time and then completing written evaluation forms. A secondary method of data collection and analysis, videotaping, was also utilized. Because of the nature of the materials developed within the project scope and the very young age of the target population, the child data collection via videotaping necessarily played a secondary role. In collecting the professional and parent evaluation data, definite attempts were made to ensure a geographical and program type distribution. Thus, all three components were tested across the nation and by professionals and parents in a variety of program types and models (public school, private agency, institution, residential school). A variety of professionals, all experienced in working with the young visually impaired child and his/her parents, participated in the evaluation. These professionals included teachers, administrators, medical doctors, nurses, social workers, physical therapists, occupational therapists, and orientation and mobility specialists. A specific effort was made to evaluate the project components with Black, Spanish-speaking, and Native American visually impaired children and their families. To this end, evaluation sites included Chicago, Los Angeles, New York City, Houston, Dallas, Miami, and programs in the states of Arizona, New Mexico, Texas, and Alaska. A complete listing of program evaluators can be found in Appendix A.

In selecting professionals for field evaluators, the following were criteria used:

1. A minimum of 2 years experience working with young visually impaired children.
2. Access to 5-10 legally blind children, functioning within a birth-24 month level.
3. Involvement in understanding or providing home-based programming.
4. Interest in project goals and objectives.
5. Commitment to complete evaluation forms by specified date.
6. Willingness to use all three program components for a specified period of time each week over a designated evaluation period.

Participating professionals were also responsible for identifying parents who could also serve as field evaluators of the Home-Based Media materials. When time and funding permitted, Printing House staff visited field evaluation sites to coordinate the evaluation procedures. Project staff met with participating professionals and administrators to explain the project scope and evaluation methods, met with parents to invite their participation in the project, assisted in identifying appropriate student subjects, and helped to collect evaluative data. Professionals and parents who participated in long-term evaluations of the project materials received a small honorarium for their written evaluations; parents and professionals who were short-term evaluators did not receive an honorarium.

As previously reported, videotaping was used as a secondary and minor child-data evaluation method. Five young visually impaired children were videotaped on a pre and post data collection basis. Videotapes were then compared to analyze specific skills developed through the assistance of the child use tangible components. The tapes were used for analyzing effectiveness of the materials and were not distributed or incorporated into the project. Releases were secured from the parents of all children participating in the videotaping.

Evaluation forms, completed by both professionals and parents, were the basis used to determine revisions and modifications to each component. Specific forms were developed for use with professionals and parents. Evaluation questions varied dependent on the component evaluated. Several sample areas included on evaluation forms for professionals follow.

1. a. Tangible child use materials--Electronic mat:

Rate safety and durability (adequate or inadequate).  
Suggest improvements.

Is the mat sufficiently sensitive to pressure--  
reliably producing a tone in response to the  
child's actions?

Comment on the fabric used--its color, texture,  
durability, and the pattern in which it is sewn.  
Suggest improvements.

Comment on the arrangement of the mat. Do you  
prefer the squares permanently joined to form one  
mat, individual squares able to be joined in

several configurations, or some other arrangement?  
Explain your answer.

Comment on the tones produced by the mat. Are they pleasant? Would you prefer a "sound effects" mat which made a variety of sounds--a beep, whistle, pop, etc.?

Describe the ways you plan to use these materials.  
Be specific.

1. b. Tangible child use materials--Head Device:

Rate safety and durability (adequate or inadequate).  
Suggest improvements.

Does the head device adjust easily to fit the children using it? If not, suggest improvements.

Comment on the sound produced. Was it pleasant, pitched too high or low, too loud or soft?  
Suggest improvements.

Did the head device operate reliably, producing a tone when the child raised his head and remaining quiet when he did not?

Did it appear that the head device was comfortable on the child when worn for periods of 15 minutes? 30 minutes? 1 hour? If uncomfortable, suggest improvements.

Briefly describe activities which could be performed with the head device.

2. Slide-cassette program:

What other areas of information should be included in the slide/cassette presentation?

Are there any materials which should be removed from the presentation? If so, what, and why should it be taken out?

Should the materials be organized differently? If yes, refer to specific activities shown and indicate

how they should be sequenced.

Is there too much or too little repetition of material?  
Please answer and indicate which activities would  
receive more or less emphasis.

Comment on the advantages and disadvantages of  
slide/cassette vs. videotape, picture-book/tape  
combination, tapes only, or written material with  
illustrations.

What is your opinion of the technical quality of the  
slides--clarity, color, composition?

What is your opinion of the quality of the tapes?  
Consider voice quality and clarity.

Pinpoint areas where there is too much or too little  
narration, if any. Would you edit or reword these  
problem areas, or is the verbal presentation  
satisfactory?

Comment on the background music chosen.

Are there too many or too few slides to go with the  
narration? If yes, what portions of the presentation  
should be simplified or added to?

Is the slide/cassette presentation too long or too  
short?

Describe the ways you plan to use these materials.  
Be specific.

Comment on the overall anticipated effectiveness of  
the slide-cassette program.

### 3. Guidebook:

What other areas of information should be included,  
if any?

Is there any materials which should be deleted from  
the Resource Guide?

Should the materials be grouped in lessons? If not, how should it be organized?

Different topics may be grouped under the same lesson. Do you like the groupings we have provided or can you suggest more appropriate ones?

Please note any additional reading which should be added to the "Reading Lists" in the Guide.

Please give the names and, if possible, the addresses of agencies, parent groups, newsletters and magazines which would be helpful for parents to know about.

Should the Resource Guide be permanently bound or in a looseleaf ring binder?

Describe the ways you plan to use these materials. Be specific.

In addition to the general professional evaluation form, teachers who were long-term field testing sites were requested to collect limited child data. The teacher was asked to record the following for each child using the tangible materials: chronological and functional ages; type and severity of handicaps; description of developmental level as related to reaching toward a sound source, gross motor skills, degree of head control, midline skills, reach/grasp, and so on. Specific data were requested for each child, examples of which follow.

Mat:

1. How often did you use the mat with the child?
2. How do you rate the child's reaction to the mat?  
very positive/positive/indifferent/negative/very negative
  - a. When using the mat, did the child roll over, creep, or crawl more readily than usual?
  - b. If no, do you think continued use of the mat would have effected an improvement?
  - c. If yes, was the improvement carried over into other situations when the mat was not in use?

3. Describe how you used the mat with the child.

Head device:

1. How often did you use the head device with the child?
2. How do you rate the child's reaction to the device?  
very positive/positive/indifferent/negative/  
very negative
3. a. Was there an improvement in the child's  
ability to hold up his head when he used this  
device?  
b. If no, do you think continued use of the head  
device would have effected any improvement?  
c. If yes, did the ability transfer to other  
situations when the head device was not being  
worn?
4. Describe how you used the head device with the  
child.

Separate evaluation forms were constructed for parents. Questions to be answered by the parent evaluators were very similar to those posed to the professional for the Guidebook. Both professionals and parents completed a general evaluation on the guidebook as well as notations, additions, deletions, etc. on guide pages. Each of these comments was recorded and analyzed along with other evaluative data. Parent evaluation forms were available in both English and Spanish, as the slide-cassette presentation was available in either language. Examples of parent evaluation directions and questions follow.

Because "Playing the Crucial Role" is for parent audiences, we need your comments and suggestions for making the program as helpful and appropriate as possible. The presentation is for parents of visually impaired infants from birth to 2 years of age. With that in mind, please give us your opinions. Be as brief or take as much space as you wish.

Comment on the information presented in "Playing the Crucial Role."

- Would you like anything added or emphasized more strongly?
- Would you like anything left out or deemphasized?

Comment on the general content (tone) of the presentation and attitudes it portrays.

Comment on the quality of the presentation; narrator's voice, photography, background music, etc.

Comment on the organization of the presentation. Is there a better way to organize the information it contains? If yes, please give your suggestions.

What is your overall opinion of "Playing the Crucial Role" and its helpfulness for you and other parents of visually impaired infants?

Along with the parent evaluation form, project staff also developed Parent Discussion Supplemental Materials to be used in a group discussion and subsequent evaluation of the slide-cassette presentation. These materials were also translated into Spanish.

As previously noted, data from all evaluators for all three components were posted, checked, and analyzed by project staff. These data were used to determine revisions and modifications. Where applicable, a criterion of 80% was utilized to identify specific items to revise. If 20% or more of the evaluators indicated an item needed revision, it was definitely modified.

The data for this project are voluminous. The reasons are the large numbers of field evaluators utilized, some 200 total, and the individualized responses needed to answer the questions posed in the evaluation. Collecting, recording, and analyzing the data took a great deal of staff time. Excellent and frequently enthusiastic cooperation was characteristic of both parent and professional field evaluators.

The Home-Based Media project, in its final form, significantly exceeded the written scope proposed in the grant application. For example, cassette-tapes were planned in the application; ultimately, the project produced a visual and audio package. The project also exceeded both the proposed budget and timeline, which resulted in a significant contribution of Printing House staff and resources. The number of evaluators involved in the field evaluation phases also

exceeded that of previous materials development projects for young visually impaired children. Presently, as the materials are moving through the Printing House production pipeline, there is already a significant demand for the Home-Based Media materials. Such requests have come from state departments of education, parent groups, teachers, program administrators, and training personnel. The Printing House is responding to the preproduction requests by loaning field evaluation copies of the slide-cassette and guidebook.

The final products of the Home-Based Media project efforts include three distinct but related components. A tangible child-use item, an electronic mat which rewards a child's movement with sound, vibration, air, etc., has demonstrated effectiveness in motivating young visually impaired students to develop gross motor skills. A second component, a slide-cassette program targeted for parents and teachers, illustrates ways in which a visually impaired child can learn about his world through everyday experiences. Additionally a resource book, containing over 100 pages, has been written and evaluated to assist parents and teachers in developing critical skills in young visually impaired children, birth to 24 months. These three components, presenting a comprehensive package of materials to assist parents and teachers with the infant visually impaired child, will be produced and distributed nationally by the American Printing House for the Blind.

Staff believe that the materials developed within this project will help to fill a specific and documented need of educational materials designed for professional, parent, and child users. Project personnel, however, have become increasingly aware of the need for additional systematic study of the infant and young visually impaired child and his family. Staff also realize the need for research into possible interfaces of technology and the specific skill development needs of the young visually impaired child. The federal government has sponsored significant research in this area, but always targeted for the adolescent or adult. (A notable exception to this general statement is the use of the Sonic Guide with infants.) Also, services for these young visually impaired children and their families continue to be a function of geography. Unfortunately both availability and quality of programs and services depends upon where one lives. It is the hope of the project staff, however, that the materials developed through the Home-Based Media project will assist parents and teachers throughout the nation in developing critical skills in infant and developmentally young visually impaired children.

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Appendix A  
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In addition, some 75 percent evaluators completed a questionnaire regarding the Home-Based Media materials but did not choose to put their name on the evaluation form.

Appendix B

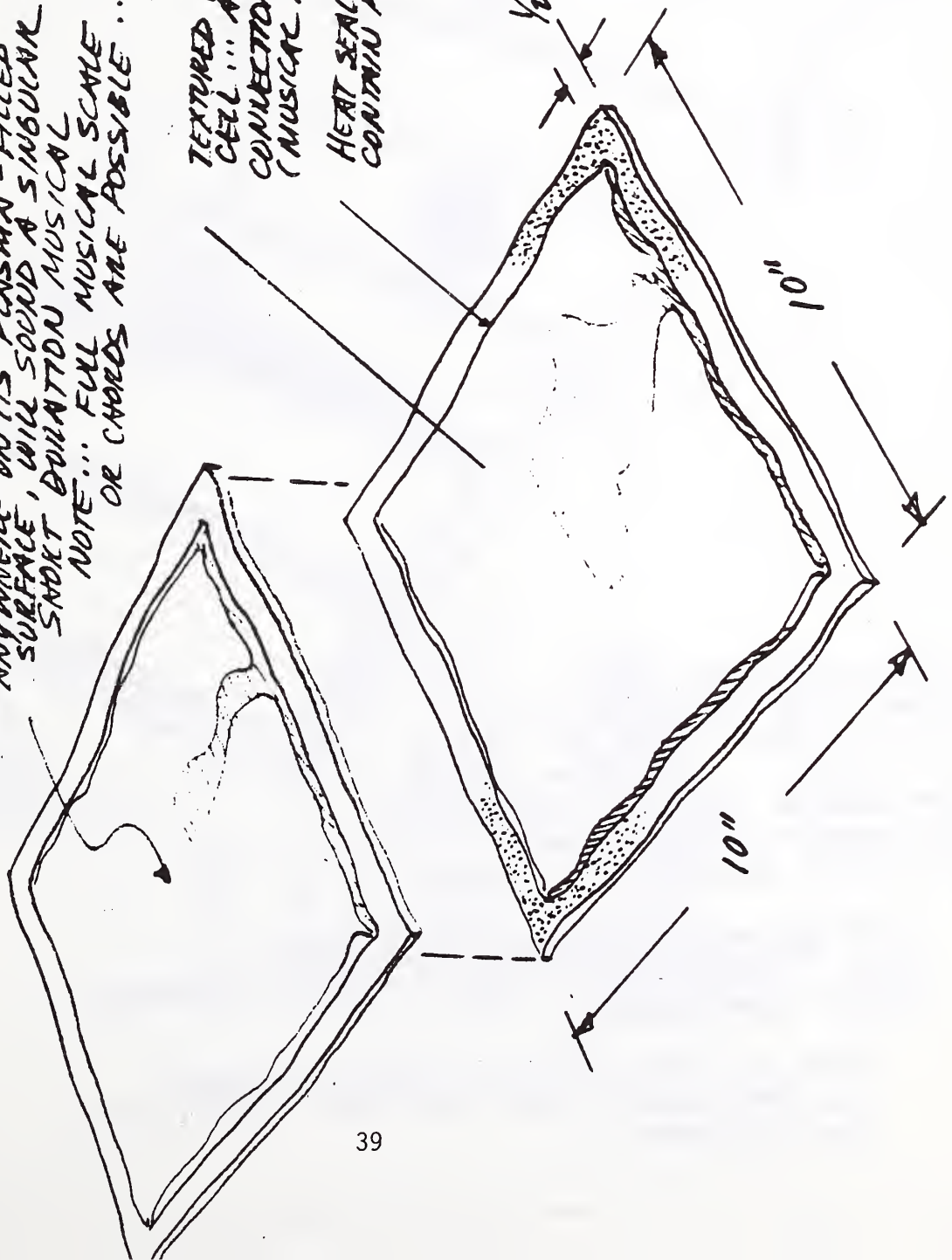
Prototypical Drawings of Electronic Mat and Headband

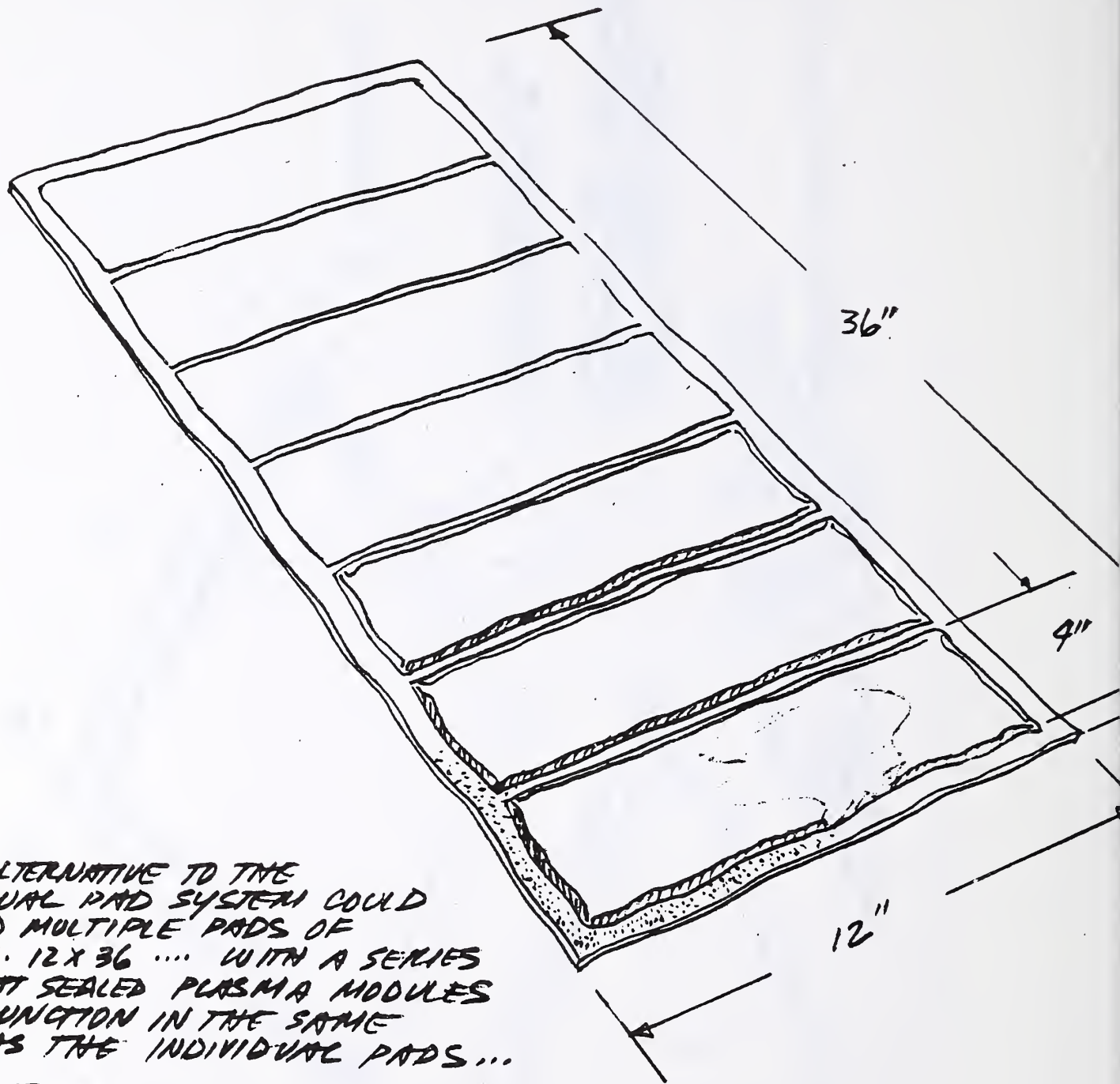
EACH MODULE WHEN PRESSED  
ANYWHERE ON ITS PLASMA-FILLED  
SURFACE, WILL SOUND A SINGULAR (AND DIFFERENT)  
SHORT DURATION MUSICAL  
NOTE... FULL MUSICAL SCALE  
OR CHORDS ARE POSSIBLE...

TEXTURED VINYL PLASMA  
CELL... ACTUATES ELECTRONIC  
CONNECTION FOR SOUNDING MECHANISMS  
(MUSICAL NOTE..)

HEAT SEALED EDGE TO  
CONTAIN PLASMA CELL

$\frac{1}{2}$ " VELCRO STRIP

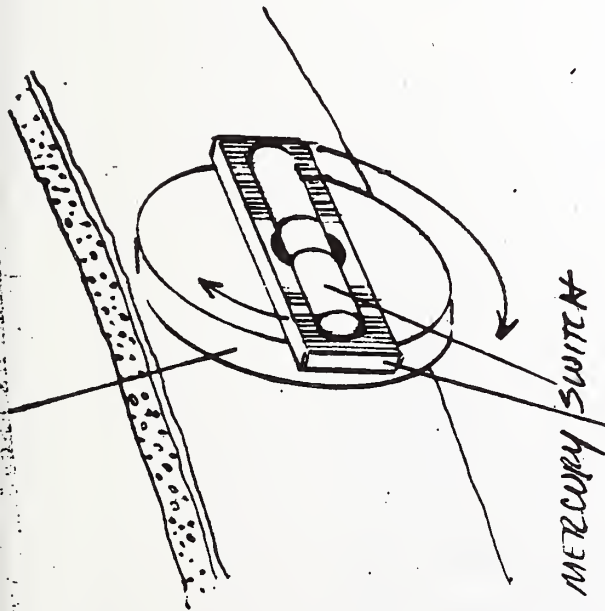




AN ALTERNATIVE TO THE  
INDIVIDUAL PAD SYSTEM COULD  
BE (2) MULTIPLE PADS OF  
APPROX. 12 X 36 .... WITH A SERIES  
OF HEAT SEALED PLASMA MODULES  
THAT FUNCTION IN THE SAME  
WAY AS THE INDIVIDUAL PADS...

FLEXIBILITY IS NEARLY THE SAME...  
AND THERE COULD BE A CONSIDERABLE  
COST SAVINGS...

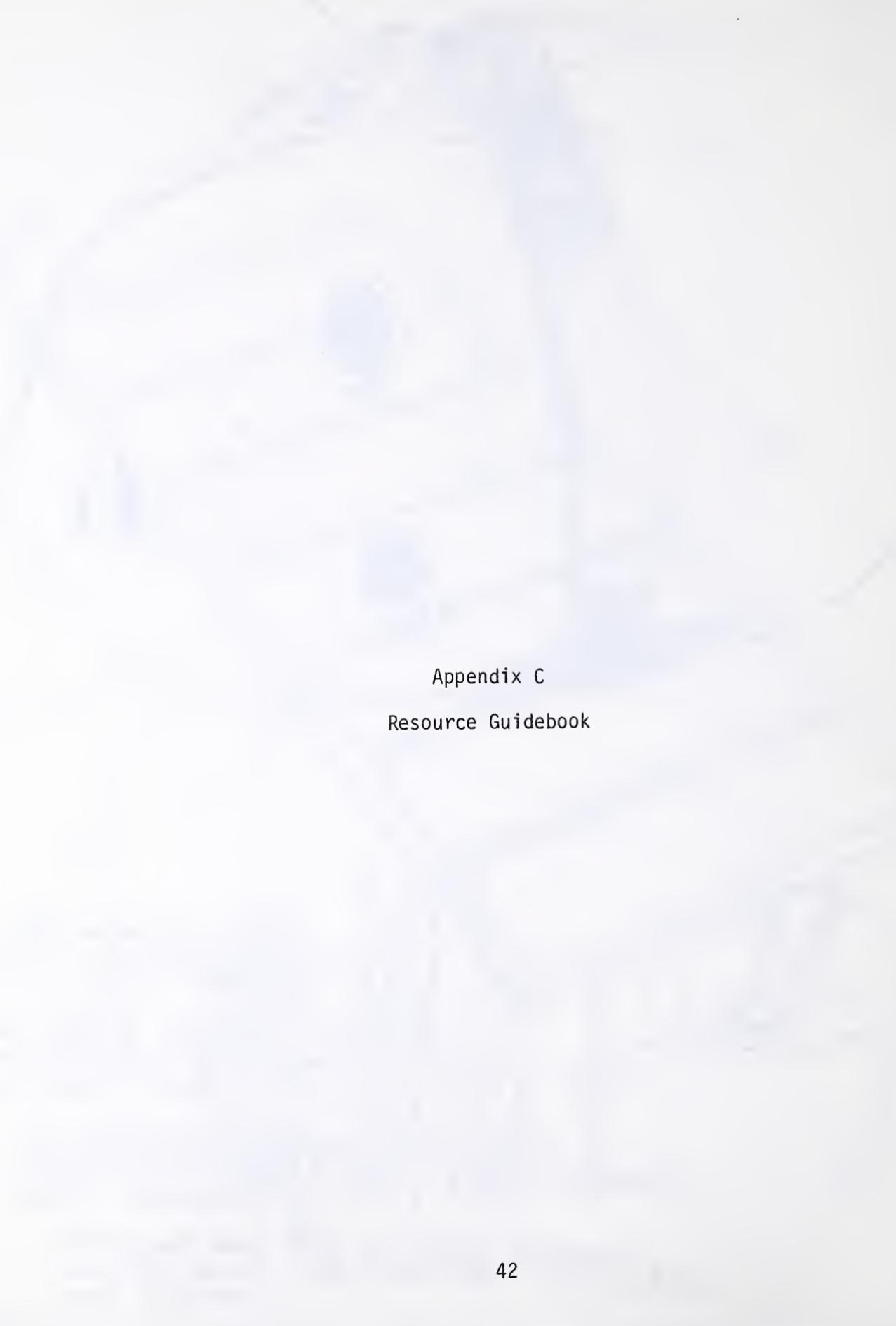
THE TWO PADS (OR 3) COULD ATTACH  
IN THE SAME WAY AS THE SINGULAR  
PAD SYSTEM...



MERCURY SWITCH

ADJUSTABLE BAR  
 ALLOWS SELECTIVE  
 POSITIONING OF MERCURY  
 SWITCH AXIS...  
 TO ACCOMMODATE  
 MATURING INFANTS ABILITY  
 TO RAISE HIS HEAD TO  
 VARYING HEIGHTS IN HIS  
 DEVELOPMENT

④ TURNING THE HEAD BAND  
 (BACK-TO-FRONT) WOULD  
 RETWARD A FORWARD  
 MOVEMENT OF THE  
 CHILDS HEAD



Appendix C  
Resource Guidebook

## I--Adjusting to the Baby

### A. Introductory statement

### B. Your reactions to the birth of your visually handicapped baby

1. Initial response: shock → shame, grief, disappointment, sadness → anger and resentment. These feelings are normal--to be expected--but must be worked through. Child loses important time while parents pull themselves together
2. You should gain support and comfort from each other by sharing your feelings. It may be helpful to:
  - a. Talk to other parents of handicapped children, and with the siblings
  - b. Seek counseling from a minister or community health service, with or without other siblings
3. After the anger, go about the business of raising a child. He is first a child, and secondly, handicapped

### C. Reactions of others

1. Siblings. You need to:
  - a. Give each child in the family special, individual time and attention every day, even if just for a few minutes
  - b. Help children understand blindness and how it is affecting their sibling and the family in general
  - c. Let each child react to the situation according to his own nature and needs--be sympathetic, let them know their feelings are normal
  - d. Encourage the siblings to participate in caring for their visually handicapped sister or brother. But don't burden them with extensive babysitting and caretaking chores--may cause resentment

2. Relatives and others. Other people take their cue from you. You decide, by your attitude, how you and your visually handicapped child will be treated by friends and relatives
  - a. Dealing with rudeness, tactlessness: develop a thick skin, keep sense of humor--maybe think of some snappy comebacks
  - b. Unsolicited advice: simply state that you feel competent to care for your child and are assisted by competent professionals. Listen--then do what you think best: you know the most about your child

#### D. Time off

1. Take a few minutes every day to give yourself some solitude away from endless demands of family; makes you better parents and humans
2. Do not devote all your energy to your handicapped child; pay attention to the marriage relationship (high rate of divorce between parents of handicapped children). Give yourself weekly treats away together for an evening or at home together with children away

#### E. Scheduling

1. Routine makes life easier because
  - a. Everyday tasks are simplified and there should be time to do everything without hurrying and becoming tense
  - b. The visually handicapped child is reassured by a schedule he can depend upon--e.g., a regular bedtime ritual will help him to sleep because he is prepared for it. Holds true for eating, dressing, etc.
2. Sample schedule

## II--Sensory Stimulation

### A. Introductory statement

### B. Touching and keeping the baby near you

1. Treat your blind child just as you would any normal child: talk, read, play, sing, introduce him to friends (giving clues to help him sort out who's who--perfume or aftershave, special song or game, etc.)
2. Blind children need even more sensory stimulation than normal children, to offset possible developmental lags due to lack of visual input.

This becomes even more critical if child is multihandicapped.

- a. This is NOT spoiling your child
  - b. Learning process begins at birth--you should also begin at this time to get accustomed to giving the child all the sensory stimulation possible
  - c. Mother is baby's first and best toy--can help tempt him outward, teach him to play with objects. Blind babies are more dependent on their mothers for a longer period of time than are sighted children
3. Early, varied stimulation helps prevent tactual defensiveness. Child needs
    - a. to be held in different positions and exposed to many kinds of sounds, sensations, and visual experiences, and shown the sources of these
    - b. to be kept near his parents (perhaps in a sling or backpack), and communicated with often at eye level to stimulate any residual vision. Pictures, bright objects and toys should be provided--can use household objects like foil, tinsel, Christmas lights, etc.

### C. Unresponsiveness of blind babies

1. Blind babies react to people differently from sighted babies. May stiffen, become still, cease to make noise, etc. when you come into the room. May seem not to need you: the "good baby"
2. These are not rejecting signals, merely the visually handicapped baby's way of attending, concentrating, figuring out what's going on
3. Don't be discouraged by the lack of ordinary "moving" actions--eye contact, smiling, etc.--that reinforce parental affection. He communicates differently, but the blind child needs plenty of cuddling, smiling, and talking to

### D. Blindisms

1. These are unattractive, peculiar-looking mannerisms: Eye poking, flicking fingers in front of eyes, staring into light, teeth grinding, hair twisting, spinning, rocking, finger sucking, masturbating, rubbing back of head on floor or mattress, etc.
2. Basically are a form of self-stimulation--you may not notice them until they are ingrained habits, so be on the lookout for them
3. What to do whenever a blindism appears:
  - a. Provide the child with something better to do--give him toys, change his surroundings, remove source of light if he is staring into it, substitute a more socially acceptable habit--thumb or pacifier sucking
  - b. Don't punish, but try to reward good behaviors

### III--Medical Concerns

#### A. Introductory statement

#### B. Vision problems

1. Causes of visual impairment: disease in pregnancy, premature birth, difficulties in delivery, inherited genetic traits, etc.
2. How the eye functions; eye transmits light, but the brain is responsible for producing images and comprehending them
3. Simple diagram of eye

#### C. Dealing with the medical profession

1. Among basic questions parents should ask their child's doctor are the following:
  - a. What is the vision problem exactly (in lay terms)?
  - b. What causes the problem?
  - c. How severe is the handicap and how will it affect the child?
  - d. Where is treatment available in the area, and do these treatment facilities specialize in children?
  - e. What changes, if any, may occur in the child's vision?
  - f. What, if any, are the long-range expenses involved?
  - g. What kind of help is available for parents?
2. Definitions and descriptions of the kinds of specialists parents may become involved with and what can be expected of them (you may want to ask other parents of handicapped children for their opinions)
  - a. Ophthalmologist--pediatric specialist preferred
  - b. Optician
  - c. Optometrist
  - d. Teachers of the visually handicapped

- e. Social worker
  - f. Genetic counselor
3. If the child's visual problem is genetically determined, you may ask your doctor for a referral to a geneticist, to find out the odds on the possibility of the condition being passed on to succeeding generations, other children, etc.
  4. You are your child's best advocate; you have a right to know everything you need to know about his vision problem and its ramifications. You should not be intimidated by your physician(s)
    - a. Feel free to ask for referral to a specialist or seek a second opinion. You know the most about your child and should seek out a doctor who is compatible with the family
    - b. On the other hand, you should not dash from specialist to specialist in a vain hope of hearing what you want to hear. Need to find a balance
- D. Surgery and its effects on the blind child and the family
1. Visually handicapped children are alarmed by hospital experience--lack of visual cues places him in a vacuum, he has no meaningful associations to help him
  2. What parents can do to alleviate the negative aspects:
    - a. Prepare the child for what is being done to him (a specific warning signal for pain, like tapping on his foot immediately beforehand). Explain what is happening, describe surroundings
    - b. Bring along a couple familiar toys for reassurance
    - c. Spend as much time with him as possible--give even more attention than a blind child ordinarily demands

d. Work with the nurses and aides in orienting them to your child  
and his special needs

3. After returning from the hospital, the child may regress, and will need  
extra attention at home for a while

E. Glossary of visual terms (Barraga's--with diacritical marks included)

#### IV--At Home with the Baby

##### A. Introductory statement

##### B. General principles

1. You should take advantage of all daily activities, in and outside of the home, to interact with your child--take opportunities to teach, name body parts, talk about whatever you're doing, during these three main parts of the day
  - a. Caretaking--feeding, changing, bathing, dressing, etc.
  - b. Playtime--one-on-one time with the child, just having fun. Play is a baby's "business," the time for him to learn and practice skills as well as enjoy himself
  - c. Housework--parent is working, child is amusing himself while returning to the parent occasionally to "touch base" (if child is confined, as to a playpen, parent should touch base with him)
2. Create a rich verbal environment just as you do a rich physical environment: expose the child to many situations and use each one for spontaneous conversation, learning, fun
  - a. Conversation. Explain whys, wheres and whats of what's happening at the moment, in simple, concrete terms, using mostly adult, not baby talk. Converse as though you expect a reply
  - b. When baby babbles, respond to it, imitate it, try to understand what's being communicated, if anything. May place the baby's hands on his own cheeks as he talks to help him understand what he's doing
  - c. Classical, easy-listening music in the environment occasionally (not all the time or baby will tune it out) can be soothing and calming at quiet times. For fun, vary with dance or soft-pop

tunes with more beat

- d. Extraneous background noise--TV, radio--should be minimized during baby's first years; can be very confusing

3. Basically: move the child around with you as you move around (Snuggli carriers, backpacks are good for small babies.)

## C. Suggestions for parent and child in the daily routine

### 1. Mealtime

- a. Give the child finger foods of various textures
- b. Let him try various manipulative activities, with mother or father or a sibling helping: stirring, shaking salt, adding ingredients, etc.
- c. Name plates, silverware, etc. while setting table, and who sits where--e.g., "This is Daddy's cup, brother's plate."
- d. Have the whole family eat together. Your visually handicapped child should be a part of the mealtime social hour--should be fed by various members of the family

### 2. Playing.

- a. Have various playthings in each room. No need to spend a lot of money. Kitchen has many items: pots and pans, lids, boxes, crumbled foil balls, disposable pie tins, coffee cans, bright plastic dishware
- b. Designate one cupboard as the child's own, to play in anytime with the special things stored there
- c. Stimulate sense of smell, using cotton balls soaked with different scents, or spices, like cinnamon sticks. Place in unbreakable containers, like margarine or cream cheese tubs, with holes punched in lids

- d. When you're outside, take your child with you, to rake leaves, smell flowers, feel the wind, swing, roll in the grass, feel many textures and smell everything around him. Give names, encourage dialogue, let him get dirty
3. Doing the laundry
- a. Place the child on top of the washer or dryer, to help put clothes in, feel the warmth and vibrations, hear the sounds of water running, pour in detergent
  - b. Have him touch wet clothes, dry clothes, fresh-from-the-dryer warm clothes, and fabrics with different textures: corduroy, towels, diapers, flannel PJ's, silk, etc.
  - c. Use a brightly colored sock to try some visual tracking if your child has any residual vision
4. Getting dressed
- a. Name body part
  - b. Talk about fasteners: buttons, zippers, ties, snaps, etc.
  - c. Name clothing and talk about what you're doing, e.g., "Give me your shoe. Put your foot in your sock, your arm in the sleeve," etc.
5. Riding in the car
- a. Keep several toys in the car. If the baby sits in the back seat, tie several toys (cup, ball, bright objects) onto a hanger with elastic, and hang it on the clothes hook
  - b. Play the radio
  - c. Give your child his own set of keys to play with--preferably the colored, aluminum ones

## 6. Grocery shopping

- a. Put the child in the cart, and call attention to its motion and various sounds around him
- b. Let him feel things, especially in the produce aisle, pointing out the contrasts between textures and shapes in things like coconuts, lemons, celery, bananas, canteloupes. Some of these also have good smells
- c. Feel cold foods with the baby, in the freezer and refrigerator sections. Let him drop things in the cart
- d. Explain what you are buying and for whom: "This is Mommy's soap," etc.
- e. If your store has a coffee-grinding machine, go there and listen to it working, feel the beans, smell the fresh-ground coffee
- f. Show your child how the conveyor belt moves and let him put some things on it

## 7. Bathtime

- a. Let the baby play with the soap and water. Demonstrate warm and cold
- b. Have a pail full of bath toys: brushes, sponges, scrubbies, a cup, powder puff--typical household items with interesting textures. Touch body parts with these and name them
- c. Play games: imitation, this-little-piggy, etc.
- d. Let the child feel and smell various grooming items found in the bathroom, such as hand lotion, powder, after-shave, cologne, shaving cream

## 8. At bedtime, your whole family can have a quiet, relaxing period--reading aloud, rocking, perhaps playing some soothing music

## V--Playing

- A. Introductory statement
- B. General principles about childrens' play
  - 1. Play is business of children: provides socialization experiences, exercise, learning opportunities, skill practice, fun; satisfies curiosity, teaches cause and effect, helps prevent self-stimulating activities like blindisms
  - 2. Handicapped children may not be able to play naturally; parents must help them. You
    - a. provide the setting, playmates, materials, and siblings
    - b. must enrich the diminished world of the blind infant even more than you would naturally enrich that of a sighted child
    - c. should invite the child to play, not impose play upon him or play for him--though initially he may have to be taught HOW to play
  - 3. The best sorts of things for a visually handicapped child to play with present a challenge to his abilities, do more than one thing, reward his efforts satisfactorily, and appeal to other senses besides vision
- C. Toys and household objects to play with
  - 1. Babies like things with faces, gentle motion, pleasing sounds
  - 2. Also appealing are
    - a. toys that can be anchored--with string, suction cups, etc.--so they won't get lost
    - b. toys that show relationships, cause and effect--e.g., drum and drumstick, xylophone, etc.
    - c. any household objects that are expendable, indestructable, safe, interesting--no need to spend a lot of money on toys

3. List of suggested playthings

D. Games.

1. You need not carry on playing games until you or your child are bored or exhausted. Don't feel pressured to be teaching and playing all the time; should be spontaneous and fun for all
2. Again, do not be discouraged by child's apparent lack of response; your child needs and likes stimulation, and responds as well as he can
3. List of suggested looking/sound games (peekaboo, hide and seek, etc.)
4. List of suggested exercise/physical games (bouncing, sliding the child, "horsey," etc.)
5. List of songs with motion, nursery rhymes (Old McDonald, Little Sally Waters, The Eensy Weensy Spider, etc.)
6. Chart of skill levels and appropriate toys and games for each level.

## VI--Parenting

### A. Introductory statement

### B. Discipline

#### 1. Key attitudes parents must have:

- a. Blind child needs discipline as much as any other child. He is a child first; though it may be hard for you to punish "the poor blind baby," you must understand that he needs to learn respect for the same established limits that apply to the sibs
- b. Blind children aren't entitled to any special treatment just because they're blind--just fair, equal treatment. The child and his parents need to have this attitude

2. Children need limits in their lives, and parents provide them. They will test you, so be as consistent as you can

3. When possible, allow plenty of time for daily routine--prevents rushing around, frayed tempers. Blind children should have chores and tasks like any other

4. Be positive. Offer choices (you can brush your teeth first or put on your pajamas first), not ultimatums. Compliment him, reward his good behavior, treat him with courtesy and respect: don't be rude

5. Relate any punishment to the undesired behavior. If Andy purposely pours his juice on the table, make him help clean up the mess and don't give him any more juice

### C. Dealing with angry feelings

1. Remember that you are angry at the child's actions, not the child; let him know this

2. Cool off before you punish your child. Whatever punishment you decide on should be for his benefit, not to provide a vent for your feelings

3. Let the child express his own anger in acceptable ways. Sympathize with him verbally and let him know you recognize and respect his feelings
  4. Do not reward a child's temper tantrums by getting panicky or giving in. Be calm, provide some kind of physical release for the child
- D. Child-proofing the house: Freedom within safe limits
1. The blind child needs even more hands-on experience than other children. Supervise him, but let him move about, explore, take bumps and falls
  2. You serve as Environmental Protection Agency: protecting the baby, the house, and your own peace of mind. Keep him from dangerous situations, but don't shelter him too much or deny him experiences
  3. Child should have one place that is always perfectly safe for him, so he won't be hearing "No, no" all the time. His clothes and toys should be kept, always in the same place, within this domain
  4. List of safety precautions

## VII--Choosing a Program

### A. Introductory statement

### B. Child care

1. Beginning to leave the child with others at an early age is a good idea  
--provides socialization and learning opportunities for the child, respite for the parents
2. Brief description of some alternatives: Sunday or Bible school, neighborhood play groups, babysitting co-ops, etc.
3. Babysitter in the home
  - a. Introduce the sitter gradually, staying with him and the child and observing how they get along
  - b. Caretaker should be patient, warm, have a sense of humor, like babies, be energetic and in good health, flexible, positive, etc.
  - c. Leave clear instructions, in writing, and include some information on child's likes, dislikes, bedtime habits, etc. Provide a list of pertinent phone numbers and emergency information
  - d. How to find responsible babysitters: ask for references from friends, high schools, colleges, nursing schools, seminaries, etc.
4. Day care
  - a. To find a good day care center, visit several in your area; observe teacher-child interactions, condition of building and interiors, etc.
  - b. Visit the day care center frequently with your child before leaving him for the first time. To make the transition easier for the child, let him take some familiar plaything along, and stay with him a few minutes

- c. Day care routine should include rest, play, learning, snacks.  
Building should be warm, safe, cheerful, comfortable, etc.
- d. Go back and visit the center often after your child is established there--check on quality of care

C. Choosing a program for your visually handicapped child

- 1. Description of PL 94-142 and its implications for parents. Brief explanation of mainstreaming trend
- 2. Factors in choosing a program:
  - a. What kind of vision loss does the child have, and how does it affect learning?
  - b. Does the child have any other handicapping conditions?
  - c. What alternatives are there in your community?
  - d. What are your goals for your child?
- 3. Explanation of IEP. Parents must be assertive and involved in their child's education. New programs develop only as parents demand them--early childhood education laws vary from state to state--so you must express yourself as to your child's needs
- 4. First step: contact LEA. Then state department of education, if necessary

D. Lists

- 1. Parent organizations, service agencies, organizations for the blind consumer
- 2. Magazines and newsletters
- 3. Books about blindness for parents and children

E. What does the future hold?

- 1. What to do when your child realizes he's visually handicapped: give him

a simple explanation about why his eyes don't work. Your attitude will determine your child's attitude toward himself and blindness. Be positive

2. Remember your child is a child first, always, then a blind child. Like any other, you want him to grow up and be a whole person, self-sufficient and healthy

Appendix D

Playing the Crucial Role in Your Child's Development

## Slide-Cassette Program

### SLIDE

### SCRIPT

- |   |   |
|---|---|
| 1 Boy with baby                               | Music Introduction (12 sec.)                |
| 2 Baby in crib                                |   |
| 3 Boy on floor pad                            |   |
| 4 Girl pushing wheel                          | Like you, parents from many walks of life   |
| 5 Boy holding beach ball                      | are involved in raising a visually impaired |
| 6 Girl on floor in tumble form                | child. They wonder how their child will     |
| 7 Mother and child with tooth-<br>brush       | grow and develop and what they can do to    |
| 8 Mother and child with teddy<br>bear         | help him. This sound/slide program was      |
|   | designed to provide information and offer   |
|   | suggestions on aiding your visually         |
|   | impaired child in the early stages of his   |
|   | growth. It is directed to you, the par-     |
|   | ent, because as your child's primary care-  |
|   | taker and first teacher, you play the cru-  |
|   | cial role in his development.               |
| 9 Title: Playing the Crucial<br>Role          | Music (6 sec.)                              |
| 10 Title: In Your Child's<br>Development      | Music (6 sec.)                              |
|   | Silence followed by Music Intro             |
| 11 Title: Remember                            | It is important to remember that a child    |
|   | is a child whether or not he has a visual   |
|   | impairment, and every child has a vital     |
|   | need  |
| 12 Title: Sensory Stimulation                 | for sensory stimulation. All learning       |
| 13 Mother, Dad, and child rock-<br>ing        | occurs through the senses, and in turn the  |
|   | senses develop through being used. So       |
|   | talk, read, play, sing, cuddle, touch and   |
|   | kiss your child as often as possible, and   |
| 14 Title: Belonging and<br>Security           | keep her near you to provide a feeling of   |
|   | belonging and security. Your visually       |
|   | impaired child, however,                    |
| 15 Mother and child on the<br>floor with toys | will be much more dependent on you than a   |
|   | sighted child would be. You will be         |
|   | required to explain what objects are, what  |
|   | they do, and what they look like.           |
| 16 Mother helping child place<br>hand on toy  | You must substitute touching, listening,    |
|   | smelling, and tasting for seeing, and in    |
|   | doing so, sharpen those senses.             |

## Slide-Cassette Program

### SLIDE

### SCRIPT

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|----|--|---|
| 17 | Dad and child outside<br>at trellis                  | When one sense is absent or impaired, the other senses do not automatically improve. In fact, they need extra stimulation.                                      |
| 18 | Father and child smelling<br>flowers                 | Your child will need some additional help and support to learn certain things that sighted children can learn by themselves.                                    |
| 19 | Child on floor, attending to<br>voice                | The best way for a child to learn is through play, so play simple games and expose your child to a variety of stimulation. For example, for the sense of touch, |
| 20 | Mother holding child<br>wrapped in towel             | rub towels and various types of fabric over your child's body, including palms of hands and between fingers. Also rub her with lotions, perfumes,               |
| 21 | Child on bed, Mother rubbing<br>his body with powder | baby oil and powder. This will help your child become more aware of herself and her body, and prevent defensiveness.  |
| 22 | Mother and child looking<br>in mirror                | To enhance the visual sense, use fluorescent or reflective items such as lights, foil, tinsel, balls and balloons to attract her attention.                     |
| 23 | Mother and child making<br>foil ball                 | Place the objects in front of her eyes, within her visual field. Have her follow the items with her eyes and allow her to reach for and take them.              |
| 24 | Mother and child looking<br>at foil ball             |   |
| 25 | Child with pom-pom tied<br>to wrist                  | Put brightly colored pom-poms or bells on her hands. Encourage her to look at her hands and bring them together.  |
| 26 | Child on floor turning<br>toward sound of tambourine | To stimulate hearing, reward your child for turning in the direction of sound, especially a voice.  |
| 27 | Siblings playing with sound<br>producing toy         | Imitate and play with sounds your child makes. Encourage her babbling, and expose her to a wide variety of sound stimulation such as music,                     |
| 28 | Child on floor attending to<br>to clock              | sound-producing toys, traffic, rain and clocks. And finally,  |

## Slide-Cassette Program

### SLIDE

### SCRIPT

- |    |  |   |
|----|--|---|
| 29 | Child on high chair drinking from cup        | introduce your child to a variety of smells and tastes to help stimulate these senses.  |
| 30 | Child on creeper                             | Remember, you have the responsibility not only to make your home a safe and interesting place for your child to play and explore, but also to provide many and varied experiences for her. So, whenever possible,   |
| 31 | Child in backpack with mother                | keep your child with you, perhaps in a backpack or sling, and talk to her a great deal, even before you think she can understand, because without your explanations, sounds and sensations have little meaning.     |
| 32 | Title: Everyday Activities                   | The following are ways to teach your visually impaired child when you're performing everyday activities. These suggestions are simply ideas you may want to consider using while going through your daily routines. |
| 33 | Title: Mealtimes                             | Mealtimes. Name table objects,  |
| 34 | Mother and child holding red plate           | such as plates, cups and silverware, while setting the table, and say who sits where. For instance, "This is daddy's cup," and "This is brother's fork."  |
| 35 | Child in highchair with finger foods         | Give your child finger foods of various textures and tastes. Let her try various  |
| 36 | Mother helping child pour                    | manipulative activities such as stirring and pouring.   |
| 37 | Family together at mealtime                  | And, have the whole family eat together whenever possible. Your child should be a part of the mealtime social hour and should be fed by various family members.   |
| 38 | Title: Playtimes                             | Playtimes. Have various playthings in each room.  |
| 39 | Child at kitchen cupboard with various items | There is no need to spend a lot of money. The kitchen has many appropriate items: pots, pans, lids, boxes, crumbled paper balls, disposable pie tins, and bright plastic dishware.                                  |

## Slide-Cassette Program

### SLIDE

### SCRIPT

- Set aside one cupboard as your child's own, to play in anytime with the special things she has stored there.
- 40 Child smelling margarine tub Stimulate her sense of smell, using cotton balls soaked with different scents or spices. Place the balls in unbreakable containers such as margarine or cream cheese tubs with holes punched in the lids.
- 41 Child on creeper with playthings Before your child can walk, you may want to consider buying a creeper or similar device to aid movement. This provides good exercise and a way to explore and find playthings.
- 42 Dad and child at the sandbox Take your child with you when you go outside, and allow her to feel and smell everything around her. Encourage a conversation, and don't mind if she gets dirty.
- 43 Child in crib with suspended toy And when your child is confined to a playpen or crib, which should only be for very short periods, suspend or place items with interesting textures, shapes and sounds within her reach.
- 44 Title: Doing the laundry Doing the laundry. Place your child
- 45 Mother helping child put clothes in washer on top of the washer or dryer to help put in clothes. Allow her to feel the warmth and vibrations and hear the sound of running water.
- 46 Mother and child feeling clothes from dryer Have her touch wet clothes, dry clothes, fresh-from-the-dryer warm clothes, and fabrics with different textures such as corduroy, terry cloth, flannel and silk.
- 47 Mother helping child look at colored sock And if your child has any remaining vision, use a brightly colored sock and try to have her follow it with her eyes.
- 48 Title: Getting dressed Getting dressed. Touch and name
- 49 Mother and child getting dressed your child's body parts. Place your hands on her hands and have her follow your actions.

## Slide-Cassette Program

### SLIDE

### SCRIPT

- |    |   |  |
|----|---|--|
| 50 | Mother pulling sweater over child's head      | Talk about fasteners such as buttons, zippers, ties and snaps. Name clothing   |
| 51 | Mother tying child's shoe                     | and talk about what's happening. For example, "Put your right arm in your right sleeve," and "Your foot goes in your shoe."  |
| 52 | Title: Riding in the car                      | Riding in the car. Keep several toys in the car.   |
| 53 | Toys in basket near car seat                  | Riding can be a very dull experience without playthings to help pass the time. Give your child her own set of keys to play with, preferably the colored aluminum ones.   |
| 54 | Child in car seat holding steering wheel toy  | Consider buying a commercially available item that attaches to the car seat, such as a plastic steering wheel with a horn.   |
| 55 | Child in car seat, playing with mobile        | Or, you may want to make a mobile by tying a soft, cuddly toy to the clothes hook with elastic string.   |
| 56 | Title: Grocery shopping                       | Grocery shopping. Let your child feel things,  |
| 57 | Child in grocery cart with bananas            | especially in the produce aisle, pointing out the differences between textures and shapes in things like coconuts, lemons, celery and bananas. Some of these also have good smells. Call attention to the grocery cart's motion and the various sounds in the store. |
| 58 | Mother showing child the cold whipped topping | Let your child feel cold foods from the refrigerator and freezer sections. Allow her to drop things into the cart.   |
| 59 | Mother and child with tangerines              | Explain what you are buying and for whom, for instance, "This is Mommy's soap," and "These tangerines are for Sister's lunch." Show your child how the conveyor belt moves and let her put some things on it.  |
| 60 | Title: Bathtime                               | Bathtime. Let your child play with the soap and water,   |

## Slide-Cassette Program

### SLIDE

### SCRIPT

- |   |  |
|---|--|
| 61 Child in tub full of soapy water               | and show her the difference between warm and cool. Play games like this-little-piggy, and encourage splashing.   |
| 62 Pail of bath toys in tub                       | Have a pail full of bath toys such as brushes, sponges, scrubbies, cups and other household items with interesting textures. Touch and name your child's body parts with these items.                                  |
| 63 Mother and child's bathroom with toothbrush    | Let your child feel and smell various grooming items found in the bathroom, such as hand lotion, powder, shaving cream and toothpaste.   |
| 64 Title: Bedtime                                 | And at bedtime, your entire family can have a quiet, relaxing period.  |
| 65 Dad with children reading a story              | Read aloud, rock and perhaps play some soothing music.   |
| 66 Title: Remember                                | It is important to remember that a visually impaired child follows the same sequence of development as a sighted child but may proceed at a slower pace and act and react differently than would normally be expected. |
| 67 Child reacting stiffly to being held by Mother | She may become stiff and still, and stop making noise in certain situations. This is often interpreted as a rejection, when in fact it is merely a way of paying attention and figuring out what is happening.         |
| 68 Father hugging child                           | Initiate a loving and caring attitude, because your attitude will determine your child's feeling towards herself and her blindness.  |
| 69 Child on rug surrounded by toys                | And finally, try not to be overprotective. Allow your child to be as independent as possible, for her degree of independence as a child has a direct bearing   |

Slide-Cassette Program

SLIDE

SCRIPT

on her desire for and degree of  
independence as an adult. (Keep slide  
on for 6 seconds after voice ends.)

Credits 70 through 74

Music (9 sec.)



